PATENT APPLICATION
Docket No. 5038-138
Client No. P12510

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Jeremy Burr and Rajgopal Ramamoorthy

Serial No.: 10/006,171 Examiner: Henry N. Tran

Filed: December 4, 2001 Group Art Unit: 2674

For: INDUCTIVE POWER SOURCE FOR PERIPHERAL DEVICES

Confirmation No.: 2907

Date: August 24, 2006

Mail Stop Amendments
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO OFFICE ACTION

CLAIMS AS AMENDED					
For:	Number After Amendment	Previous Number	Extra	Rate	Additional Fee
Total Claims	29	30	0	x $50 =	$ 0
Independent Claims	4	4	0	x $200 =	$ 0
TOTAL ADDITIONAL FEE FOR THIS AMENDMENT					$ 0

Any deficiency or overpayment should be charged or credited to deposit account number 13-1703.

This communication is responsive to the Office Action dated May 25, 2006.

Amendments to the SPECIFICATION begin on page 2.

Amendments to the DRAWINGS begin on page 3.

Amendments to the CLAIMS begin on page 4.

REMARKS begin on page 9.

SPECIFICATION

Please replace the paragraph beginning at page 9, line 4 with the following:

FIG. 4 is a functional block diagram showing connections and circuit blocks used in the inductive charging system. As before, the cable 42 provides power to the mousepad 20. The cable 42 may be directly attached to the mousepad 20, or may be intermediately connected to the control housing 40 (FIG. 1). The power from the cable 42 is supplied to a primary side power circuit 122, which also has an output to drive the source loop 22. The primary power circuit 122 includes whatever circuitry is necessary to convert the voltage and current provided by the cable 42 into a signal that will provide a constantly changing current for the source loop 22. For example, if the input voltage is a direct current (DC) voltage, the primary power circuit 122 includes a circuit to produce a changing signal, such as an oscillation circuit 121. An example of such a circuit is a Pulse Width Modulation (PWM) circuit, which can supply the source loop with a constantly changing voltage and current while having a dc voltage as an input. Other oscillating circuits perform similar functions that can be used in place of the PWM circuit. Additionally, the primary power circuit 122 may include voltage matching circuitry, if necessary, to match the voltage supplied to it by the cable 42 with the voltage that is supplied to the source loop 22. For instance, the cable 42 may supply a 120 Volt alternating current (AC) signal. Although the AC portion of that incoming signal may not need to be rectified, it is likely that the 120 volts would be reduced to a lower voltage by the voltage matching circuitry included in the primary power circuit 122.

DRAWINGS

Attached is a proposed Replacement Sheet showing a revised Fig. 4. Also included is an Annotated Sheet showing in detail the changes made.

CLAIMS

1. (Currently Amended) A system for inductively transferring electrical power to a computer peripheral device during normal operation of the peripheral device, comprising:

a base unit including:

a source loop solenoid having an axis substantially perpendicular to a planar surface of the base unit to generate a magnetic field,

a loop power circuit to provide a signal to drive the source loop, and

a power source coupler structured to provide power to the loop power circuit when the power source coupler is coupled to a power source; and

the peripheral device having a victim loop and structured to be inductively coupled to the base unit while the peripheral device is in operable condition [[.]];

wherein the base unit comprises a first area and a second area, and wherein a level of magnetic permeability is higher in the first area than in the second area.

2. (Original) The power transfer system of claim 1 wherein the peripheral device is a computer mouse.

3. (Original) The power transfer system of claim 2 wherein the base unit is incorporated in a mousepad.

4. (Cancelled)

5. (Original) The power transfer system of claim 1 wherein the peripheral device comprises a first area and a second area, and wherein a level of magnetic permeability is higher in the first area than in the second area.

6. (Original) The power transfer system of claim 5 wherein the peripheral device further comprises a data transmitter having an antenna formed in the first area.

7. (Previously presented) The power transfer system of claim 1 wherein the victim loop is a coil of wire having a solenoid shape.

8. (Original) The power transfer system of claim 1 wherein the base further comprises one or more additional source loops.

9. (Original) The power transfer system of claim 1 wherein the peripheral device further includes:

a rechargeable battery, and

a recharging circuit coupled between the victim loop and the rechargeable battery.

10. (Original) The power transfer system of claim 1, further comprising:

a data transmitter coupled to the peripheral device, and

a data receiver coupled to the base unit.

11. (Original) The power transfer system of claim 10, wherein the data transmitter sends a signal selected from the group consisting of radio frequency, infra-red, and ultrasonic.

12. (Original) The power transfer system of claim 10 wherein the data transmitter is structured to send wireless signals and the data receiver is structured to receive wireless signals.

13. (Original) The power transfer system of claim 1 wherein the peripheral device is additionally in operative condition when not inductively coupled to the base device.

14. (Currently Amended) A system for supplying power to a computer mouse, comprising:

a base unit having a power signal input connectable to a power source, and having a non-planar magnetic source loop coupled to the power signal input, the source loop comprising an axis arranged substantially perpendicular to a planar surface of the base unit; and

the computer mouse having a magnetic victim loop coupled to a load circuit within the mouse, wherein the computer mouse comprises a first area and a second area, and wherein a level of magnetic permeability is higher in the first area than in the second area.

15. (Original) The system of claim 14, further comprising a rechargeable battery in the computer mouse, and wherein the load circuit is coupled to the rechargeable battery.

16. (Original) The system of claim 14 wherein the load circuit is structured to drive a mouse positional circuit within the computer mouse.

17. (Original) The system of claim 14 wherein the load circuit is a wireless data transmitter.

18. (Original) The system of claim 14 wherein the power signal input is coupled to a serial bus, and, when the serial bus is powered, the base unit is structured to supply power from the serial bus to a source loop signal generator, which is coupled to the magnetic source loop.

19. (Original) The system of claim 18 wherein the source loop signal generator comprises an oscillator circuit.

20. (Original) The system of claim 19 wherein the oscillator circuit can generate a signal having a frequency at or above 60 cycles per second.

21. (Original) The system of claim 15, further comprising a docking cradle shaped to receive the computer mouse, the docking cradle having a battery recharging circuit.

22. (Currently Amended) The system of claim 14, wherein, during a normal operating position of the computer mouse, the magnetic source loop and the magnetic victim loop are ~~horizontally~~ overlapped.

23. (Currently Amended) A method of powering a computer peripheral device having a victim loop coupled to circuitry of the peripheral device, the method comprising:

accepting a power signal at a power input; and

applying a source loop driving signal to a source loop solenoid while the source loop solenoid is proximate to the computer peripheral device;

wherein the source loop solenoid has an axis substantially perpendicular to a planar surface over which the peripheral device is moved[[.]]; and

wherein the peripheral device comprises a first area and a second area, and wherein a level of magnetic permeability is higher in the first area than in the second area.

24. (Original) The method of claim 23 wherein the power signal is the source loop driving signal.

25. (Original) The method of claim 23, further comprising rectifying the power signal to a source loop driving signal.

26. (Original) The method of claim 23 wherein the power signal is coupled to a bus on a personal computer.

27. (Currently Amended) A method of recharging a rechargeable battery in a computer mouse that has a magnetic victim loop coupled to a battery recharging circuit, the method comprising:

creating a magnetic field by driving a magnetic source loop solenoid with a magnetic source loop driving signal; and

causing the magnetic field to interact with the magnetic victim loop in the computer mouse;

wherein the magnetic source loop solenoid has an axis substantially perpendicular to a planar surface over which the computer mouse is moved[[.]];

wherein the magnetic source loop solenoid is included in a base unit; and

wherein the base unit comprises a first area and a second area, and wherein a level of magnetic permeability is higher in the first area than in the second area.

28. (Original) The method of claim 27, further comprising:

accepting a power signal from a power source; and

converting the power signal into the magnetic source loop driving signal.

29. (Original) The method of claim 28 wherein converting the power signal comprises generating an oscillating signal from the power signal using a pulse width modulation circuit.

30. (Original) The method of claim 28 wherein accepting a power signal from a power source comprises accepting a power signal from a computer bus.

REMARKS

Specification

The specification is objected to under 37 CFR 75(d)(1) as failing to provide antecedent basis for various terms found in the claims. Applicant traverses this objection.

Compliance with the written description requirement only requires that the meaning of the claims may be ascertainable by reference to the description. *See Lampi Corp. v. American Power Prods., Inc.*, 56 U.S.P.Q.2d 1445, 1455 (Fed. Cir. 2000) ("In order to satisfy the written description requirement, the disclosure as originally filed need not provide *in haec verba* ['in these words'] support for the claimed matter at issue."). Even if the exact words and phrases objected to by the Examiner do not appear in the specification, a person of ordinary skill in the art would understand the meaning of these terms with reference to the specification and drawings.

For example, support for the term "base unit" in claim 1 may be found, for example, at page 4, line 11 ("base") and page 4, line 15 ("mousepad base"). A person of ordinary skill in the art would understand the claim term "base unit" to be supported by the embodiments described as a "base", "mousepad base", etc.

As a further example, support for the term "source loop solenoid" in claim 1 may be found, for example, at page 4, line 4 ("source loop"), line 17 (coils or loops of wire"), and line 27 ("source loop"). A person of ordinary skill in the art would understand the claim term "source loop solenoid" to be supported by the embodiments described as having loops or coils which form a solenoid.

Similarly, support for the term "loop power circuit" in claim 1 may be found, for example, at page 9, lines 8-9.

Support for the term "power source coupler" in claim 1 may be found, for example, at page 9, line 11 (item 42 of Fig. 4).

Support for the terms "first area" and "second area" in claims 4 and 5 may be found, for example, at page 8, lines 5-10 ("The high permeability *area* of the mousepad 20 is indicated with the reference 28", whereas a lower permeability area is outside of reference 28).

Support for the term "power signal input" in claim 14 may be found, for example, at page 5, line 15 (item 42 of Fig. 1).

Support for the term "power source" in claim 14 may be found, for example, at page 5, lines 10-14; page 1, lines 15-18.

Support for the term "non-planar magnetic source loop" in claim 14 may be found, for example, at page 7, lines 5-6 and Fig. 2.

Support for the term "mouse positional circuit" in claim 16 may be found, for example, at page 10, lines 22-27 (X-Y locating circuitry is "positional").

Support for the term "source loop signal generator" in claim 18 may be found, for example, at page 9, lines 10-12.

Support for the term "magnetic source loop" in claim 18 may be found, for example, at page 7, lines 5-6.

Support for the term "oscillator circuit" in claim 19 may be found, for example, at page 9, lines 13-16.

Support for the term "magnetic source loop" in claim 22 may be found, for example, at page 7, lines 5-6.

Support for the term "magnetic victim loop" in claim 22 may be found, for example, at page 7, line 25.

Drawings

The drawings are objected to for failing to show various features recited in the claims. Applicant traverses this objection.

An embodiment of an "antenna" recited in claim 6 is shown as item 38 in Fig. 3 and described in the specification at page 8, lines 26-27.

An embodiment of a "mouse positional circuit" recited in claim 16 is shown as item 136 in Fig. 4 and described in the specification at page 10, lines 23-27

An embodiment of a "source loop signal generator" recited in claims 18 and 19 is shown as item 122 in Fig. 4 and described in the specification at page 9, lines 9-12.

An embodiment of an "oscillator circuit" as recited in claim 19 is shown as item 121 in revised Fig. 4. Support for this drawing revision may be found in the specification at page 9, lines 13-16.

The term "horizontal" has been deleted from claim 22.

An embodiment of a "pulse width modulation circuit" as recited in claim 29 is shown as item 121 in revised Fig. 4. Support for this drawing revision may be found in the specification at page 9, lines 13-16.

Claim Rejections – 35 USC §103

Claims 1-3, 7-18, 22-24, 27 and 28 are rejected under 35 USC §103(a) as being unpatentable over Hsiang, German Patent No. DE 29922632 U1, in view of Rohde, U.S. Patent No. 5,959,433. Claims 19-21, 25, 26, 29 and 30 are rejected under 35 USC §103(a) as being unpatentable over Hsiang, German Patent No. DE 29922632 U1, in view of Rohde, U.S. Patent No. 5,959,433 (hereinafter "Hsiang-Rohde"), as applied to claims 1-3, 7-18, 22-24, 27 and 20 above, and further in view of Tien, United Kingdom Patent No. GB 2314470 A).

Independent claims 1 and 27 are amended to include limitations of allowable claim 4. Claim 4 is cancelled. Independent claims 14 and 23 are amended to include limitations of allowable claim 5. For at least this reason, claims 1, 14, 23 and 27 are now be allowable, along with their associated dependent claims.

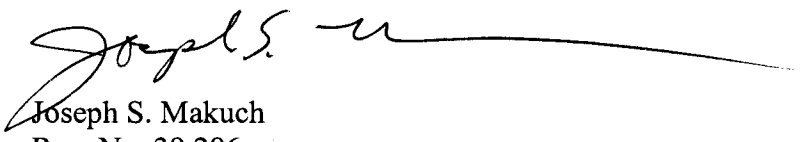
Conclusion

Applicant requests reconsideration in view of the foregoing amendments and remarks. The Examiner is encouraged to telephone the undersigned at (503) 222-3613 if it appears that an interview would be helpful in advancing the case.

Customer No. 20575

Respectfully submitted,

MARGER JOHNSON & McCOLLOM, P.C.



Joseph S. Makuch
Reg. No. 39,286

MARGER JOHNSON & McCOLLOM, P.C.
210 SW Morrison Street, Suite 400
Portland, OR 97204
(503) 222-3613

Replacement Sheet

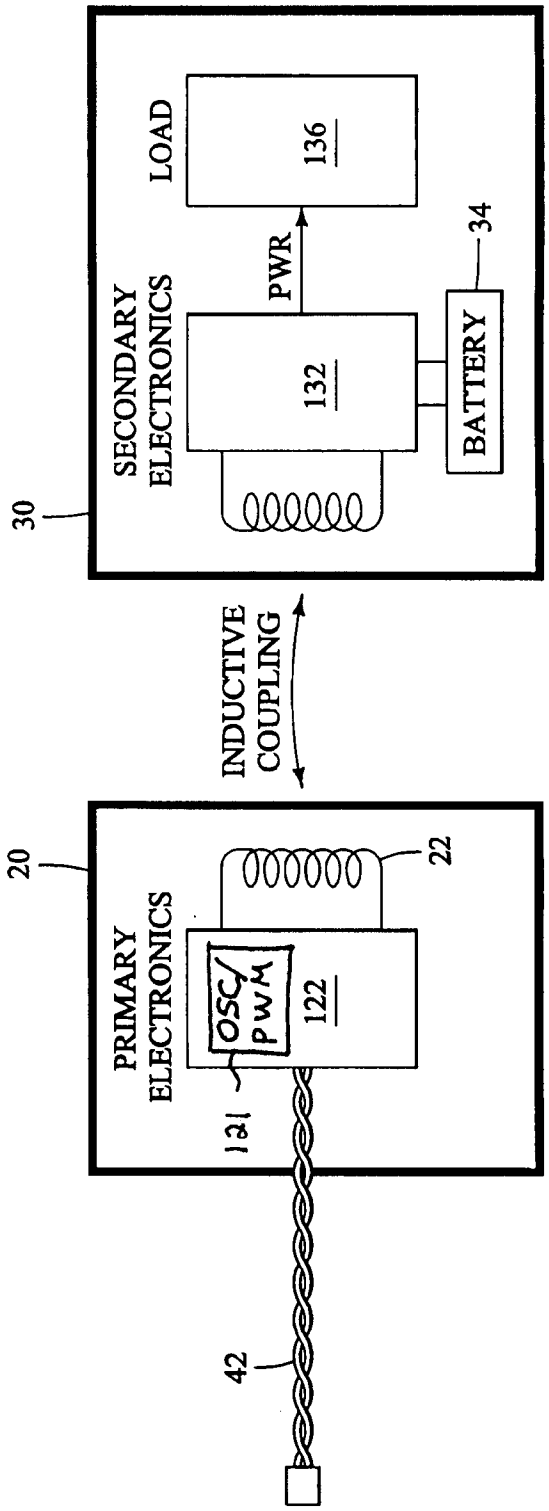


FIG. 4

Annotated Sheet Showing Changes

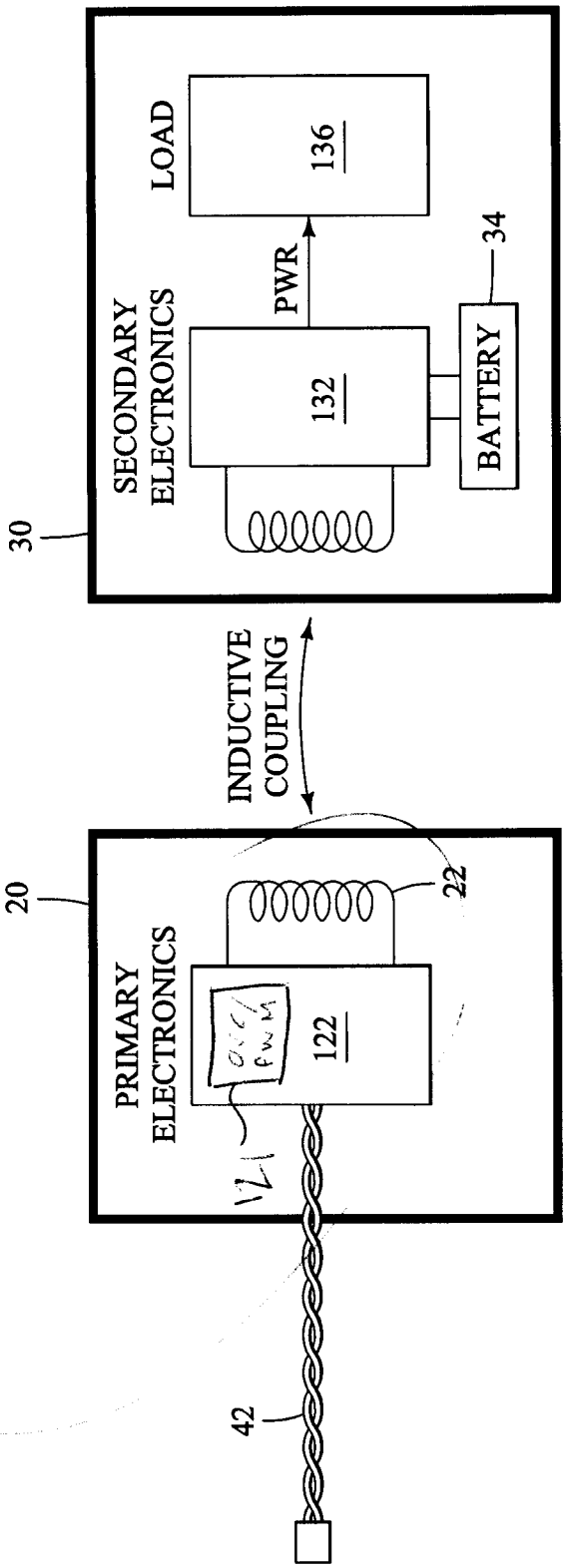


FIG. 4